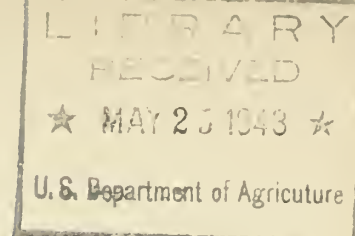


Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

166.3
M68
no. 57
cop. 2



Use of the **LEVEL PRODUCTION PLAN** *in milk marketing*

A QUOTA PLAN USED IN THE JANESVILLE,
WISC. AND OTHER MILK MARKETS.

BY LOUIS F. HERRMANN, Agricultural Economist
and WILLIAM C. WELDEN, Senior Agricultural Economist

COOPERATIVE RESEARCH AND SERVICE DIVISION
FARM CREDIT ADMINISTRATION
U. S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D. C.

CONTENTS

	Page
Janesville milk sales and supply.....	2
The old base plan and the level production plan contrasted.....	3
Effect of price plans on individual producers' incomes.....	4
Producers' opinions.....	6
General appraisal.....	6
Attitude toward quota plan details.....	7
Limits to changes in producers' milk production programs.....	8
Inconsistency of individual producers' evenness.....	10
Experience in Chattanooga and Connecticut.....	11
Conclusions.....	12
Appendix.....	15

USE OF THE LEVEL PRODUCTION PLAN IN MILK MARKETING

By

Louis F. Herrmann
Agricultural Economist

and

William C. Welden
Senior Agricultural Economist

A uniform rate of production throughout the year in fluid milk markets has recognized advantages. Leveling out production, however, means increased production costs. Frequently, "even" producers may find their prices lowered by the seasonal surplus of "uneven" producers. Countless plans have been worked out for dealing with these problems, and there is widespread interest in each distinctive form of plan.

The Chicago market and submarkets served by the Pure Milk Association are among those in which a base plan has been used to insure that the burden of low surplus prices is borne by the dairy-men who produce the seasonal surplus.

The Chicago plan was started in 1929. It entitled producers to a higher year-round price for that part of their milk volume which was not in excess of their volume during the lowest months of the previous year. This was clearly intended to encourage uniform deliveries throughout the year, but after 2 years the plan was changed in the hope of also encouraging some year-to-year uniformity. This evolution of the plan's details tended to reduce the advantage of "even" seasonal production. As a result, a wholly new plan was adopted in some of the association's submarkets during 1940. 1/

1/ The Chicago base plan was discontinued in the Chicago market in 1939 and no level production plan has been in effect in that market since September of that year. Several of the secondary markets continued to use the base plan after that date.

The new plan for encouraging level production is intended to apply exclusively to seasonal uniformity. It is distinctly different from the old base plan. The essence of the new level production plan is contained in six rules or groups of rules. These are: 2/

- (1) A new quota is established every year.
- (2) The new quota is established during the 5 months of July through November.
- (3) A producer failing to make a satisfactory quota may request a quota adjustment which will be made according to a specified rule, or otherwise at the discretion of a quota plan committee.
- (4) Production above the quota amount is paid for at the price of excess milk during the months of January through June.
- (5) New producers receive quotas according to a rule which is essentially the same as that by which old producer quotas are adjusted.
- (6) The quota attaches to the herd, if the herd stays on the farm or if it is moved without change of owners.

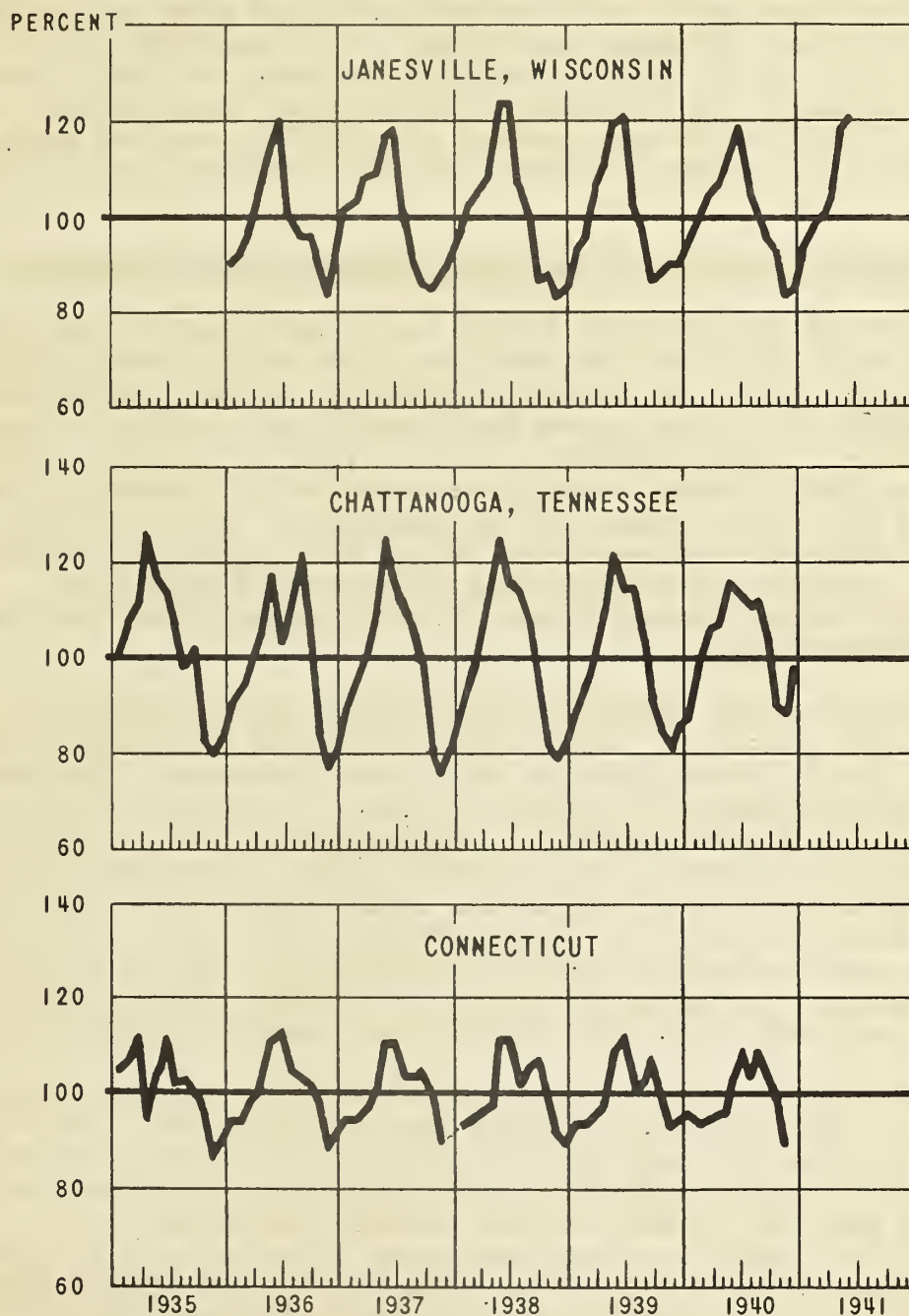
The present study compares the effect of both plans on producers' incomes, and analyzes producers' own appraisals of the new plan. Personal visits to the farms of more than 50 of the producers supplying the Janesville, Wisc. market afforded a broad cross-section of producers' attitudes. Complete data on 5 years' milk deliveries of the 72 producers on that market in June, 1941, were obtained from association records. The brief experience of the Janesville market is supplemented with conclusions drawn from 10 and 5 years' use of similar plans in the Chattanooga, Tenn., and Hartford, Conn., markets.

Janesville Milk Sales and Supply

There has been only a small seasonal variation in the sales of milk and cream by Janesville dealers during the past 5 years. During the same years daily production in the flush months has averaged nearly 50 percent higher than the lowest production during the fall months (fig. 1). There has been typically 2-1/2 to 3 times as much excess milk during June as during October or November. Excess milk is paid for at the same price paid for milk at condenseries in the vicinity of Janesville, which is lower than the price of milk used for bottling. The result of the uneven production was

2/ See Appendix for an exact copy of the rules used in the Janesville market.

MONTHLY MILK DELIVERIES AS PERCENT OF
YEARLY AVERAGE DELIVERIES
1935-41



04866

Figure 1. - Seasonal changes in deliveries of milk by producers in selected markets

a seasonal lowering of prices that could have been avoided if production had remained the same the year around.

If the average production per herd had been uniform from month to month, and exactly equal to the yearly average, only 56 producers would have been needed to supply Janesville in 1940. There would have been enough milk for bottledmilk and cream sales with 20 percent more for daily variations. As it was, there were 74 to 78 producers on the market throughout the year. In June 74 producers marketed 324,982 pounds of excess milk. The imaginary 56 even producers would have marketed only 127,000 pounds of excess, and would have received 15 cents per 100 pounds more for all their milk.

The Old Base Plan and the Level Production Plan Contrasted

The old base plan had started out by providing that each producer would make a new base each year equal to his average daily production through the months of September, October, and November. Throughout the following year the producer would receive a higher price for all delivered milk up to the amount of his base. These two provisions tended to stimulate excessive fall production, and even a higher year-round level of production. The onset of the depression made any incentive to higher total production undesirable, but under any circumstances most producers would have objected to the tendency of some to build a bigger base than they contemplated using.

The new level production plan provides for a new base or quota each year, also, but the quota is figured from average deliveries of the 5-month period of July through November. This makes it more difficult and expensive to build an excessively high quota, although it gives the genuinely even producer a quota as good or better than he could get in a 3-month period. In addition, milk delivered in excess of the allotted quota receives the excess price only during the months of January through June. Thus, a high quota gives a price advantage for only a short time. This is a further lessening of the incentive to build an excessive quota, though still reserving to the even producer the benefits of his evenness.

The old base plan was changed for the third and later years that it was in effect. Producers were no longer given a chance to make an entire new base each year, but rules were set up to redistribute base among producers. A producer could buy or sell established base, or transfer it under various conditions. Over a period of 8 years there were two general adjustments of all bases according to actual deliveries. From time to time various rules were incorporated in the plan which penalized extreme departures from even seasonal production or enabled producers to adjust their bases to a higher level of production. However, the adjustments

were not wholly satisfactory, for even producers in 1940-41 would have received practically the same income as uneven producers (see page 5).

Under the level production plan it is intended that quotas will be established anew every year. The provisions for transfer of quotas and adjustment of unsatisfactory quotas are not elaborate. One reason for simple adjustment provisions is that a quota that does not fit a producer's production plans can be changed within a year by the normal operation of the plant. Also, a quota that is too low does not penalize the producer during more than 6 months at the most.

In a market which is generally short of milk in the fall it seems illogical to discourage production in that season. Under the plan of using base and excess prices the year 'round, it frequently happened that a producer who helped overcome the shortage found himself producing over his base and getting a penalty, rather than a premium, on his added production. By applying quotas during only the market flush season, the level production plan avoids penalizing producers unnecessarily (see page 11).

Effect of Price Plans on Individual Producers' Incomes

The level production plan operates on the principle that milk production can be evened out by assuring producers a higher price for an even supply of milk. A simple computation given above showed how the market average price could be increased as a result of fewer even producers being needed. However, the immediate effect of the level production plan is to divide the total sales returns differently among producers. Producers with even deliveries tend to get higher prices under the level production plan than they would if they were paid an average or blended price. Table 1 shows the prices received by even producers as compared with uneven producers in the Janesville market during 1940-41.

Figuring returns on a blended price plan the average price received by spring producers (those whose flush season production was heavy) was higher than the price received by even producers -- this being a result of price increases during the year which made the average market price in June 1941 nearly 20 cents per 100 pounds higher than it had been in July 1940. There was a difference of 1.2 cents between fall and spring producers. (Fall producers had heavier production during the fall than during the spring.)

The old base plan gave hardly any difference between the average prices of groups of even and uneven producers. The biggest difference was 1.3 cents per 100 pounds. It is apparent that there was only a very slight relation between a producer's seasonality and the base he held at the time the old base plan was dropped.

Table 1. - Prices received by even and uneven producers under three different price plans, Janesville market, 1940-41

	Number of producers	Price plan		
		Blended	Old base	Level production
Even producers <u>1</u> /.....	25	\$1.898	\$1.903	\$1.911
Fall producers <u>2</u> /.....	21	1.890	1.890	1.927
Spring producers <u>3</u> /.....	19	1.902	1.897	1.863
All producers.....		\$1.897	\$1.897	\$1.897

- 1/ Producers who delivered an average of 100 to 120 percent as much milk daily in the quota-using period (January through June) as in the quota-forming period (July through November).
- 2/ Producers delivering less than 100 percent as much in the quota-using as in the quota-forming period. Since four-fifths of these producers averaged 85 percent or more, they are practically "even" producers.
- 3/ Producers delivering more than 120 percent as much in the quota-using as in the quota-forming period.

The average prices resulting from the level production plan show that even production paid. The even producers received 1.5 cents less than fall producers, but 4.8 cents more than spring producers.

Altogether, 41 producers had a higher income under the level production plan than they would have had if a blended price had been paid the year round.

The level production plan may encourage more even production, regardless of how many producers benefit directly from it according to a comparison of incomes. However, the claim is sometimes heard that the larger producers are more even and get all the benefits. Obviously, in the Janesville market the smaller producers tended to be more even. Otherwise, the level production plan would have resulted in higher prices to only a few producers. The average even producer delivered 272 pounds daily, while producers with a large spring surplus delivered an average of 378 pounds daily (table 2).

Differences between the average prices received by even and uneven producers probably understate the effect of the level production plan on income. The most uneven producer in the Janesville market had 29.9 percent of his milk paid for at excess prices. This producer's average price for the year was 14.4 cents per 100 pounds lower than the average price received by all producers. However, his income was lowered in only a few months of the year,

and during those months the loss of income was much greater than the average of 14.4 cents would indicate. For the month of January, when the producer received excess prices for 54 percent of his deliveries, his income was \$38.36 less than it would have been if he had received quota price for all he delivered. 3/ His average price in January was 40.2 cents less than the quota price.

Comparing actual income with the income possible if all one's milk had brought the quota price is probably a fair description of the way most producers measure the effect of the quota plan. However, it is not an accurate way of estimating the difference between probable returns if no quota plan were in effect. Without a quota plan producers would receive an average or blended price which would be less than the price of quota milk.

Table 2. - Relation between seasonality of production and size of producer, Janesville market, 1940-41

	Number of producers	Average daily deliveries
		(Pounds)
Even producers.....	25	272
Fall producers.....	21	233
Spring producers.....	19	378

Producers' Opinions

General Appraisal

The level production plan was definitely satisfactory to the Janesville producers as a group. More than that, nearly all of them regarded it as an improvement over the old base plan. An appreciable number of producers said they would prefer not to have any base plan at all, but that the present plan was agreeable "if there must be one."

In approving the level production plan, producers most frequently said that it favors an even flow of milk, or that even production is rewarded. Some liked the plan because it gave the advantage of a more stable market.

The objections to the plan suggest constructive steps that might be taken to convince dissenting producers that the plan is

3/ At the time this producer was interviewed, he stated that in some months his income "was \$30 less because of the lower excess price." He had evidently made calculations similar to the one made here, but overstated the number of months.

desirable. Objections were expressed because: "The quota period comes in a bad time (of the year)." "The association picked the worst months in which to establish quotas." There were reservations of this sort even from some producers who were generally satisfied with the plan. These producers fail to understand the reason for the plan. Their attitude is evidence that there should be frequent explanation of the way the level production plan works.

Attitude Toward Quota Plan Details

The level production plan has six rules, of which three particularly set it apart from other forms of base or quota plan. A new quota each year, established in a relatively long quota-forming period, and used as a basis of apportioning excess prices during a relatively short quota-using period are the essential features. Quota adjustments, new producer arrangements, and provisions for sale and transfer round out the rules (see page 2). Following the questions designed to cover producers' general attitude, specific questions were asked on each of these details.

The establishment of entirely new quotas every year was favored by 80 percent of the producers. This was a feature of the new plan that producers frequently referred to in contrast to the old plan, often mentioning it before a specific question was asked. As reasons for favoring the annual reestablishment of quotas, producers said it was "more fair for everybody," it "makes it possible to change farm plans," and "nobody is holding base without using it."

The length of the quota-forming period was as thoroughly supported as was its annual recurrence. Producers were asked if a longer or shorter period than 5 months should be used, and 78 percent favored the 5-month period. The length and timing of the quota-forming period was of vital interest to producers, judging from the number of unprompted comments. As mentioned above, the nature and number of objections expressed on this question point rather clearly to the central point for further educational work.

Quota adjustments had been requested by 10 of the producers interviewed. Adjustments had been granted to 8, none of whom expressed dissatisfaction with the treatment they received. Two who asked for, but did not receive, an adjustment were not dissatisfied on that account. Most of the producers had no comment to offer on the policy which had been followed in making quota adjustments. In general, they were not much interested in the quota adjustment provisions, and the little dissatisfaction did not indicate any underlying fault in the association's adjustment policy.

Whether quota and excess prices should be used for the 6 months of January through June, or whether they should be used for more or fewer months was a question which received a high percentage of inconclusive replies. Half of the producers were satisfied with the

use of quotas for the 6 months. However, many of the producers did not seem to have a firm conviction in the matter. For example, 6 of the 14 replies favoring use of quotas for 12 months were stated in approximately these words: "It would be all right to use quota and excess prices the year 'round." Replies favoring the 6-month period did not usually indicate a marked preference. Only 1 producer remarked that there wasn't much excess milk in the winter, so there was no reason to penalize those who produced over their quota.

The producers were asked, "Should a producer be required to deliver at least a percentage of his quota in order to hold it?" Only 5 producers said that such a rule should be used. The 44 who answered "no" to this question frequently pointed out (1) that it would penalize the producer who suffered bad luck during any month because of loss of cows, etc., and (2) that the dairymen of the Janesville area did not generally follow the practice of building a bigger quota than they planned to use (also, with a 5-month quota-forming period, it is less advantageous to maintain the extra cows needed to build an over-large quota).

Producers were mostly unfamiliar with the rule by which new producers were given quotas. Ninety-eight percent of those interviewed would suggest no changes in the new producer rules. It was clearly evident that, under the conditions existing during the first year's operation of this plan, its effect on the entry of new producers was not noticeable enough to attract attention.

The quota established by a producer under this plan is considered to be his property, but can be transferred to another person only if the herd and farm are sold together. Producers were asked, "Are you satisfied with the rule that no quota goes with cows or herd if they are sold to leave the farm?" To a large majority the restriction on quota transfers was acceptable: 78 percent indicated their unreserved satisfaction, while an additional 16 percent expressed indifference or were undecided. Only 6 percent of the producers actively favored having the base fully transferable with the cows.

Limits to Changes in Producers' Milk Production Programs

The interviews with producers took place near the end of August, when the second quota-forming period was well begun. At that time, more than half of the producers were planning to earn larger quotas for 1942 than they had held for 1941. This indicated that the producers then serving the market would more nearly satisfy the market needs in the fall than they had in other years.

At the close of the quota-forming period quota increases had been earned by 39 out of 69 producers. The average quota was

increased from 289 pounds to 295 pounds. It is still to be seen whether the higher quotas mean that seasonal variations are being reduced, or whether there will be a higher level of production with the same seasonal variation as before.

The producers in the Janesville market are not acutely price conscious when it comes to planning the size or intensity of their dairy enterprises. About two-thirds of those interviewed said that prices of milk and feed had little influence on their production plans. It is doubtful if these answers should be accepted without qualification. Milk and feed prices had been fairly stable, and favorable, for about two years. Possibly producers would admit being more sensitive if questioned during a period of greater fluctuations in feed and milk prices. However, the comments given in answer to these questions support the conclusion that milk production may be less sensitive to feed and milk price changes here than in other production areas. Producers frequently stated that they raised all their own feed, so were little affected by feed prices; or that they planned to keep a herd of a certain size to utilize the feed they raised, so that milk prices did not govern their program too closely.

This relative disinterest in price may lead to the conclusion that producers would not find the quota plan much of an incentive to change their production patterns. However, because the price benefits of even production are concentrated in a few months, they may be much more effective than the average yearly price would indicate. Also, the plan's educational effects are important, as well as price.

One of the most serious difficulties confronting quota plans in other markets has been run-away trends in quota making. The level-production plan used in the Janesville market has a 5-month quota-forming period, in contrast with 3-month periods that were formerly used. Thus, it is less likely that producers will try to build quotas higher than the level of production they can maintain the year around.

Further restriction on run-away quota building might lie in the relation between the present herd size and the limits to practicable expansion. The size of herd might be limited by the amount of barn space, or by the size of the labor or feed supplies on the given farm.

Barns and equipment were being used to capacity on 15 out of 49 of the farms visited. On about two-thirds of the remainder the barns and equipment were being used to at least 75 percent of capacity. Only 11 farms could increase their herds as much as 50 percent with their present stall equipment and space.

Feed production and labor supply limit the size of herds in many instances where there is barn space and equipment for more cows. Although only 15 herds were as big as the barn would allow, 23 herds were as big as they had been at any time during the past 10 years. Barn capacity would permit an increase of 25 percent over the number of cows being kept at the time of this study, but the maximum number of cows kept at any time during the past 10 years was only 9 percent greater than the number of cows kept in August 1941.

Inconsistency of Individual Producers' Evenness

It is a constant struggle for a producer to keep the same even year 'round production year after year. A few of the Janesville producers have the reputation of succeeding at it, and a study of their production records for the period of 1936 to 1941 showed they deserved the reputation. But with few exceptions, the evenness that a producer attained in one year gave no warning at all of the evenness he was to attain in the following year. For example, there was a small group of producers whose daily deliveries during January through June 1940, were between 100 and 110 percent of their daily deliveries during July through November 1939. ^{4/} In the following year, January through June 1941, the percentages which their deliveries were of July - November 1940, were scattered over a range from as low as 76 to as high as 186. Only one-third of the group stayed within the 100 to 110 percent limits.

The extent to which this changing of evenness took place can hardly be exaggerated. In the spring of 1940 one producer delivered 153 percent of his 1939 fall rate; in the following spring his deliveries were only 56 percent of his 1940 fall rate. Another producer was "even" in the spring of 1940, delivering 102 percent of his previous fall rate, while in the spring of 1941 his deliveries were 194 percent of his 1940 fall deliveries.

On the average, over a 5-year period, this index of producers' evenness varied 14 points from one year to the next for individual producers. Only a dozen producers out of 56 had an average year-to-year variation of less than 10 points.

Undoubtedly, the variation may have been greater during this period, because of the small premium on evenness under the old base plan, than it is likely to be under the new plan. It seems probable that the greater returns for even production under the new plan will encourage producers to incur production expenses that they would have avoided formerly.

^{4/} This percentage figure can be considered to be an "index of evenness of production."

The fact that any producer's index of evenness is apt to be inconsistent from year to year is an urgent argument for flexibility and openness in the quota plan. Until it is proven by further market experience that producers can successfully control this variation, it may be sound to proceed as though half of last year's "even" producers may have become "uneven" this year through events beyond their power to remedy except at excessive cost.

Experience in Chattanooga and Connecticut

The problem of marketing milk for "canebrake dairymen" forced the Chattanooga Area Milk Producers' Association to adopt a plan resembling Pure Milk Associations' Level Production Plan as early as 1931. A quota-forming period from October 1 to March 31 coincides with the barn-feeding season. A blended price is paid for all milk during this season. Each producer gets a quota equal to 120 percent of his deliveries; a singularly liberal provision. During the remainder of the year, excess milk receives (on a straight butterfat basis) a price that is 2 cents a pound over Chicago butter standards.

New producers rarely enter the Chattanooga market until the quota-forming period, although one that does will receive excess price for all of his milk for 15 days, after which he is given a quota equal to his average deliveries for the first 15 days. Transfers and divisions of quotas have been freely allowed. Earned quotas are rarely adjusted, however, although the executive committee of the association will act on requests. During a recent Bang's disease eradication program, the members in annual meeting provided that a producer disposing of reactors during the quota-forming period might retain his old quota for another year unless he made a new, higher quota despite the loss of cows.

The Chattanooga plan has been virtually unchanged for the 10 years it has been used. It has resulted in a reduction of the seasonal peak from a high, in 1936, of 173 percent of the preceding low month, to a high of 150 percent in 1940. There is less need for the plan now, because local production conditions are now more favorable to even production than they were, and because the association is in a better position to take care of excess production. But it is felt that the plan still serves a useful purpose, and it is to be continued. The market now comes nearer to having a surplus in the winter months than in the summer months, and if there is a continued trend in this direction an under-quota penalty rule might be adopted. Otherwise it is probable that the present plan will be continued without modification.

In the Connecticut markets, a different set of production and marketing conditions prevails than in Chattanooga. With more even production to start with, the level production plan has, in 4 years noticeably worked a further improvement.

Some form of quota plan has been used in Connecticut continuously since 1922. The original method was to assign producers the quotas they asked for on April 1 each year, then to penalize them for over or under deliveries.

This plan was changed because quotas finally grew too large, because producers were penalized for under delivery when under delivery was desirable, and because an unsatisfactory adjustment policy developed. After trying modified plans in 1935 and 1936, the association adopted its present plan.

The quota-forming period extends through July to November. Average deliveries during this period are the quotas on which quota prices are paid in the spring months. There has been a tendency for producers to build excessively large quotas. To offset this, limits have been placed on the amount of quota increase permitted, and fewer months have been included in the quota-using period. For 1 year, increases were limited to 50 quarts. In later years increases were limited to 15 percent of the previous quota and finally to an amount determined by the amount of quota lost by other producers, plus any increase in the Association's sales of Class I milk. Excess deliveries received the excess price during January through June in the first year the plan was used. Later January was dropped, and finally, for 1942, it was planned to pay excess price for excess deliveries during May and June only.

Quotas are granted to new producers at the rate of 8 quarts per cow. Quota transfers are permitted according to rules very similar to those used in the Janesville market. Adjustments are made upon request, a special committee being appointed in each market to act on such requests. In 1941, 14 percent of the producers requested adjustments. Of those requesting adjustments, nearly all received some increases over the quotas they had earned, although the committees frequently granted less than the producer's request.

Since Connecticut Milk Producers' Association has used this level production plan, milk deliveries have steadily become more even. In 1936 daily deliveries were 31 percent higher in June than in the preceding November. In 1940, June deliveries were only 14 percent greater than in November 1939 deliveries.

Conclusions

The level production, or quota, plan adopted in the Janesville market in 1940 was developed to encourage seasonal uniformity of production. It replaced an older form of base plan which had had no noticeable effect on seasonality of production, and which had several features that producers objected to.

Using producers' actual production month by month, during July 1940 to June 1941, it was calculated that the level production plan definitely gave higher returns to producers who delivered the most uniform quantities the year around. The old base plan was as likely to give higher returns to an uneven producer as to an even producer.

Many small producers were even, so that a majority of producers had their incomes raised by the level production plan. Small producers can and do get a desirable degree of evenness, this study shows, so that the charge of favoritism to large producers is disproved.

More than two-thirds of the Janesville producers definitely approved the level production plan. Several producers would have been satisfied to receive a blended price the year 'round, but none openly declared himself in favor of a return to the old base plan.

When producers were questioned on the new plan, detail by detail, their general approval was confirmed again. Evidence of disapproval was clearest in regard to the choice of quota-forming months. A 5-month period was generally preferred to a shorter or longer period, but several producers objected to the July-November period. They complained about the difficulty of maintaining production then. Such objections are evidence that the purpose of the plan is not sufficiently understood. There is evidence that milk production on farms in this market is now close to the limits imposed by existing barn space, labor supplies, or feed capacity. Runaway quota-making practices may be discouraged by causes outside of the quota-plan rules themselves.

Evenness of individual producers has tended to change greatly from year to year. Very few producers proved to be consistently even; or consistently uneven. The general unevenness that was characteristic of the market from year to year had no counterpart among individual producers. It was apparent that extra efforts and expenses were needed to keep an even production record. The level production plan offers producers a chance to get extra income to offset this extra expense. Quota plans of a similar nature have been used in Chattanooga, Tenn., and in Connecticut markets for several years. Production trends have shown a steadily increased evenness. The plan has undergone little change in Chattanooga, although it has been used for 10 years. In Connecticut it has been modified to include a limit on the amount of quota increase allowable, and to reduce the quota-using period to May and June only. Policies of liberal quota adjustments in Connecticut and rare quota adjustments in Chattanooga have proved equally satisfactory.

It may be concluded that the level production plan that includes a relatively long quota-forming period and a relatively short quota-using period, and that provides for making new quotas annually, is fundamentally sound. It increased the income of even producers at the expense of uneven producers in the Janesville market, where it was generally popular, and in other markets it has shown itself to be acceptable over a period of years.

Appendix

PURE MILK ASSOCIATION LEVEL PRODUCTION PLAN
JANESVILLE WISCONSIN LOCAL MARKET

R U L E S

1. Each producer shall establish an entirely new quota each year, which quota shall be used in calculating the payment due him during the months of January through June, inclusive. During the other six months of the calendar year, each producer shall be paid at the same rate per cwt. for all milk delivered by him.
2. The quota established for each producer shall be determined by his actual average daily milk deliveries from July 1st to November 30th, inclusive.
3. The average daily deliveries of each producer during the quota-forming period (July 1st through November 30th) shall be calculated by dividing the total amount of milk delivered during this period by the number of days deliveries are actually made and accepted.
 - (a) If a producer begins to deliver milk for the first time after July 1st and before November 30th, his average shall be calculated by dividing the total milk delivered during this period by the number of days deliveries are actually made and accepted.
4. A producer delivering milk for the market for the first time on any day between December 1st and June 30th of the following year shall be deemed to be a new producer until the start of the next quota-forming period when he shall establish a new quota in the same manner as all producers.
5. New producers between December 1st and the following June 1st shall receive a quota according to the average daily deliveries of the first full calendar month's production. This quota will be equal to the percentage of total deliveries sold on the market as Class I and Class II of the same calendar month, which quota remains in effect through June 30th.
 - (a) When new producers deliveries do not begin on the first day of any month between January 1st and June 30th, for this fraction of the first month, a temporary quota will be established by dividing the total milk delivered by the number of days milk was delivered and accepted.
6. Each old producer, at his option, shall be allowed once and once only during the months December through April next following, to take the status of a new producer and receive the quota which he thereby establishes.

7. The quota of any producer who fails to deliver any milk, voluntarily remaining off his regular market for a period of 45 days, shall be canceled. When such a producer reenters the market after such a period, he shall take the status of a new producer.

8. When ownership of herd does not change, a producer's quota may be transferred from one farm to another. In the event of change in ownership of cattle with deliveries continuing from same farm an established quota may remain in effect for the new owner or new owner at his option may establish a new producer quota.

9. There shall be designated for each sub-market a Quota Plan Committee of five members, four of whom shall be local producers and the fifth the field representative of Pure Milk Association for the respective market. This Committee shall have full power and authority to recommend to the Board of Directors of Pure Milk Association, Chicago, Illinois, rules for the administration of the plan.

Table 3. - Producers' replies to questions on their general attitude toward the level-production plan; 51 Janesville producers, August 1941

Question	Producers' general attitude	Favorable replies (Yes)	Unfavorable replies (No)	Indefinite replies	Total replies
1. What, in your opinion, is the outstanding advantage or disadvantage of the present quota plan? <u>1</u> /	Favorable	25	6	4	35
	Unfavorable	3	10	3	16
	All	28	16	7	51
2. With the quota plan is it possible for you to get as much or more for your milk as without the plan?	Favorable	28	3	4	35
	Unfavorable	5	8	3	16
	All	33	11	7	51
3. Do you think the quota plan helps the market?	Favorable	28	3	4	35
	Unfavorable	2	13	1	16
	All	30	16	5	51
4. Do you approve the present quota plan?	Favorable	33	0	2	35
	Unfavorable	3	8	5	16
	All	36	8	7	51
5. Would you care to see the market have no quota plan of any sort? <u>2</u> /	Favorable	27	4	4	35
	Unfavorable	1	15	0	16
	All	28	19	4	51

1/ Favorable replies were those emphasizing advantages.

2/ Answers of "no" are tabulated as favorable in this question, "yes" unfavorable.

Table 4. - Producers' replies to questions on level-production plan details; 49 Janesville producers, August 1941

Question	Producers' general attitude	Favorable replies (Yes)	Unfavorable replies (No)	Indefinite replies	Total replies
1. Should entirely new quotas be established every year?	Favorable	30	2	3	35
	Unfavorable	9	3	2	14
	All	39	5	5	49
2. Is 5 months a satisfactory length of period?	Favorable	29	3	3	35
	Unfavorable	9	3	2	14
	All	38	6	5	49
3. Do you prefer the 6-month period for using excess prices?	Favorable	20	<u>1</u> / 10	5	35
	Unfavorable	5	<u>1</u> / 4	<u>2</u> / 5	14
	All	25	<u>1</u> / 14	<u>2</u> / 10	49
4. Are you satisfied with the rule that no quota goes with cows or herd if they are sold to leave the farm?	Favorable	30	1	4	35
	Unfavorable	8	2	4	14
	All	38	3	8	49
5. Do you plan to increase your quota this year?	Favorable	18	14	3	35
	Unfavorable	10	1	3	14
	All	28	15	6	49

1/ These producers said they would prefer to have quota and excess prices used the year round.

2/ Including ⁴ who said only they would prefer blended prices the year round.

Table 5. - Year-to-year changes in producers' "index of evenness of production"; 1/ 56 Janesville producers, 1936-41

Index change points	Number of producers with specified change:				Number of producers whose greatest year- to-year change was in specified ranges
	from 1936-37	from 1937-38	from 1938-39	from 1939-40	
	to 1937-38	to 1938-39	to 1939-40	to 1940-41	
0-10.....	19	17	22	22	4
11-20.....	14	13	14	9	8
21-30.....	9	9	11	13	11
31-40.....	4	7	3	3	9
41-50.....	4	5	1	4	11
51-60.....	3	1	1	2	3
60 or more....	3	4	4	3	10
Total.....	56	56	56	56	56

1/ This "index" is defined on page 16.

Table 6. - Number of producers whose average year-to-year change in "index of evenness of production" was a specified amount; 56 Janesville producers, 1936-41

Average year-to-year change	Number of producers
0-10	12
11-20	30
21-30	9
31-40	2
41-50	2
51-60	1
Total	56

Table 7. - Number of producers having their highest production in specified months; 56 Janesville producers, 1936-41

Month of highest production	Number of producers				
	1936-37	1937-38	1938-39	1939-40	1940-41
July.....	7	5	6	4	7
August.....	-	-	4	1	2
September.....	1	-	-	-	2
October.....	1	-	-	1	1
November.....	1	-	-	4	-
December.....	1	-	-	1	1
January.....	4	-	2	4	1
February.....	2	2	-	1	4
March.....	7	3	4	1	-
April.....	1	2	5	4	1
May.....	6	17	6	8	18
June.....	25	27	29	27	19
Total.....	56	56	56	56	56

Table 8. - Number of producers having their lowest production in specified months; 56 Janesville producers, 1936-41

Month of lowest production	Number of producers				
	1936-37	1937-38	1938-39	1939-40	1940-41
July.....	1	1	2	3	4
August.....	10	7	-	4	4
September.....	4	10	11	12	2
October.....	4	9	5	8	4
November.....	15	8	13	7	16
December.....	5	7	7	9	9
January.....	5	6	7	3	5
February.....	9	2	6	5	4
March.....	-	2	2	1	4
April.....	1	2	2	3	3
May.....	1	1	-	-	1
June.....	1	1	1	1	-
Total.....	56	56	56	56	56

Table 9. - Characteristics of farms supplying milk to Janesville;
52 farms, August 1942

Size of herd.....	per farm	20.0 cows
Capacity of barn and equipment.....	per farm	23.9 cows
Maximum size of herd in last 10 years..	per farm	21.2 cows
Average daily delivery of milk.....	per farm	280 pounds
Size of farm.....	average	160.8 acres
Supply of labor.....	per farm	1.9 men
Proportion of farm income from sale of milk.....		68.2 percent
Number of years operator has been producing milk.....	per farm	20.0 years
Number of years operator has sold milk to Janesville dealers.....	per farm	13.9 years

